

Science. New York. v. 59. May 9, 1924.

A fog-warning device. suppl. p. 14. [Fog bell controlled by hygroscopic device, invented by F. C. Hingsburg.]

Wiley, Harvey W. Frank H. Bigelow. p. 423. [Obituary.]

Scientific American. New York. v. 130. June, 1924.

Luckiesh, M. The sky by day. Solved and unsolved problems which it places before our eyes. p. 402; 438.

Olson, D. S. Snowslides. Some facts about their menace and their prevention. p. 404.

Società meteorologica italiana. Bollettino bimensuale. Torino. v. 42. Aprile-giugno 1924.

Eredia, Filippo. Correlazione tra la produzione del frumento e l'andamento annuale delle piogge in Sicilia. p. 36-38.

Gabba, L. La frequenza della nebbia a Milano dalle osservazioni del R. Osservatorio di Brera durante gli anni 1835-1920. p. 32-35.

Terrestrial magnetism and atmospheric electricity. Baltimore. v. 29. March, 1924.

Bauer, Louis A. Correlations between solar activity and atmospheric electricity. p. 23-32.

Johnston, H. F. Atmospheric-electric observations during the total solar eclipse of September 10, 1923. p. 13-22.

Tycos-Rochester. Rochester, N. Y. v. 14. July, 1924.

Ade, George. Weather. p. 12.

Facts and fictions about the rain tree. p. 34-35.

Hallenbeck, Cleve. The temperature of civilization. p. 10-11.

Huntington, Ellsworth. Report of the Committee [of the National research council] on the atmosphere and man. p. 30-31.

Lightning's toll of the forests. p. 14-15.

The mystery of will-o'-the-wisp. p. 32.

Palmer, Andrew H. Rain insurance. p. 16-19.

Pickwell, Gayle. Tornadoes—the funnel clouds. p. 5-9; 11. [Repr. from Nature Mag.]

Uncle Sam's "clerk of the weather." p. 20-21.

What we know about the aurora. p. 35.

U. S. air services. Washington, D. C. v. 9. July, 1924.

Gregg, W. R. Clarence LeRoy Meisinger, 1895-1924. p. 35-36. [Obituary.]

Wetter. Berlin. 41. Jahrg. März/April, 1924.

Peppler, W. Sonne und Wetter. p. 42-49.

Ständer, F. Die 11.86jährige Juliperiode. p. 58-61.

Zeitschrift für Instrumentenkunde. Berlin. 44. Jahrg. Juni 1924.

Linke, Franz. Ein Universal-Aktinometer. p. 274-275.

SOLAR OBSERVATIONS

SOLAR AND SKY RADIATION MEASUREMENTS DURING JULY, 1924

By HERBERT H. KIMBALL, In Charge, Solar Radiation Investigations

For a description of instruments and exposures and an account of the method of obtaining and reducing the measurements, the reader is referred to the REVIEW for January and February, 1924, 53: 42 and 113.

From Table 1 it is seen that solar radiation intensities averaged slightly above the July normal at Washington, D. C., and Madison, Wis., and slightly below at Lincoln, Nebr. There were an unusual number of clear days at the first two stations.

Table 2 shows that the total solar and sky radiation received on a horizontal surface averaged above the July normal at Washington and Lincoln, and slightly below at Madison.

Skylight polarization measurements made on 14 days at Washington give a mean of 51 per cent, with a maximum of 69 per cent on the 18th. Measurements obtained on 10 days at Madison give a mean of 60 per cent, with a maximum of 70 per cent on the 1st. The values for Madison are close to the average values for July, and those for Washington are somewhat above.

TABLE 1.—Solar radiation intensities during July, 1924.

[Gram-calories per minute per square centimeter of normal surface]

Washington, D. C.

Date	Sun's zenith distance										Local mean solar time
	8a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	
	75th mer. time	Air mass									
		A. M.				P. M.					
		e	5.0	4.0	3.0	2.0	1.0	2.0	3.0	4.0	
July 7	mm. 19.89	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm. 19.23
10	19.23		0.59	0.72	0.93	1.37					16.20
11	13.13		0.56		0.98	1.27	0.99	0.79	0.65	0.51	11.38
12	18.50		0.51	0.71	0.84						18.59
14	12.68	0.50	0.65	0.83	1.02	1.32					11.38
16	16.20	0.37	0.47	0.61	0.80	1.15					16.20
17	15.65	0.57	0.63	0.75	0.95	1.18					12.83
18	9.83	0.83	0.92	1.05	1.19	1.41	1.08				8.48
21	16.79				0.76						16.70
23	19.23				0.98		1.10	0.91	0.78		14.60
24	14.10		0.71	0.81	0.95	1.23					13.61
26	10.97				1.12						9.14
28	11.81	0.57	0.67	0.78	0.97	1.20					12.23
29	14.10			0.59	0.91	1.16					14.10
30	15.65			0.48	0.72						13.13
Means		0.57	0.63	0.73	0.94	1.25	1.06	(0.85)	(0.72)	(0.51)	
Departures		±0.00	-0.03	-0.03	+0.05	+0.06	+0.06	+0.06	+0.04	+0.13	

¹ Extrapolated.

TABLE 1.—Solar radiation intensities during July, 1924—Cont'd.

[Gram-calories per minute per square centimeter of normal surface]

Madison, Wis.

Date		Sun's zenith distance										Noon		
		8 a.m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°			
		75th mer. time	Air mass										Local mean solar time	
			A. M.					P. M.						
		e	5.0	4.0	3.0	2.0	1.0	2.0	3.0	4.0	5.0	e		
July	1	mm. 8.81	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm. 7.87		
	2	9.47		0.90	1.03	1.19	1.38					7.87		
	3	8.48			1.00	1.18	1.39					8.81		
	10	11.81				1.04	1.35	1.01				10.56		
	15	9.83				1.21	1.32	1.32				12.68		
	16	13.13				0.95						16.79		
	17	8.81				1.27	1.46					9.14		
	22	13.13				1.18	1.35					13.61		
	23	14.10				1.10	1.35					13.61		
	28	14.60				1.06						17.37		
	31	9.14					1.32					10.56		
Means.....				(0.90)	1.04	1.14	1.36	(1.01)						
Departures.....				+0.13	+0.14	+0.10	0.09	+0.02						

Lincoln, Nebr.

July 3	8.48			0.91	1.12	1.38					6.02
7	8.56			0.62	0.78						9.14
10	10.59		0.84	0.99	1.20	1.43					8.48
12	14.10			0.98	1.11						16.79
14	10.59		0.69	0.86	0.92						9.83
15	13.13		0.76	0.90	1.06	1.28					15.65
23	15.11				1.08						19.89
25	10.97				1.24						9.14
26	12.24		0.80	0.93	1.09	1.27					12.68
30	16.79				0.99	1.24					21.28
Means			0.77	0.88	1.06	1.32					
Departures			-0.03	-0.02	-0.02	-0.01					

TABLE 2.—Solar and sky radiation received on a horizontal surface

Week beginning—	Average daily radiation					Average daily departure from normal		
	Washington	Madison	Lincoln	Chicago	New York	Washington	Madison	Lincoln
	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.
July 2 1924	366	500	621	485	419	-116	-36	+43
9	577	552	633	419	516	+106	+32	+40
16	585	519	530	476	506	+110	+7	-51
23	601	467	625	447	540	+137	-23	+79
Excess or deficiency since first of year on July 29						+367	-7,078	+2,768